

Title (en)
Insulin precursors.

Title (de)
Insulin-Vorläufer.

Title (fr)
Précurseurs d'insuline.

Publication
EP 0427296 A1 19910515 (EN)

Application
EP 90121887 A 19850529

Priority
• DK 266584 A 19840530
• DK 58285 A 19850208
• EP 85303775 A 19850529

Abstract (en)
Human insulin precursors of the general formula B(1-29)-Xn-Y-A(1-21) II wherein Xn is a peptide chain with n naturally occurring amino acid residues, n = 0 - 33, Y is Lys or Arg, B(1-29) is a shortened B-chain of human insulin from Phe<B1> to Lys<B29> and A(1-21) is the A chain of human insulin, with the proviso that the peptide chain -Xn-Y- does not contain two adjacent, basic amino acid residues.

IPC 1-7
C07K 7/40; C12N 15/17

IPC 8 full level
C07K 14/575 (2006.01); **C07K 14/62** (2006.01); **C12N 1/16** (2006.01); **C12N 1/19** (2006.01); **C12N 15/00** (2006.01); **C12N 15/09** (2006.01); **C12N 15/17** (2006.01); **C12N 15/62** (2006.01); **C12N 15/69** (2006.01); **C12N 15/81** (2006.01); **C12P 21/02** (2006.01); **C12R 1/865** (2006.01)

CPC (source: EP US)
C07K 14/62 (2013.01 - EP US); **C12N 15/62** (2013.01 - EP US); **C12N 15/69** (2013.01 - EP US); **C12N 15/81** (2013.01 - EP US); **C07K 2319/02** (2013.01 - EP US); **Y10S 435/942** (2013.01 - EP US)

Citation (search report)
• [Y] EP 0068701 A2 19830105 - CANADIAN PATENTS DEV [CA]
• [YD] EP 0037255 B1 19831123
• [A] EP 0090433 A1 19831005 - GENETICS INST [US]
• [E] EP 0195691 A1 19860924 - NOVO INDUSTRI AS [DK]

Cited by
KR100449454B1; CN102816228A; EP0741188A3; US7378390B2; US8883449B2; US7268112B2; US8129146B2; WO2005054291A1; WO9703089A3; WO2007104738A3; WO2018047062A1; US11230585B2; WO2015083114A2; US10195287B2; EP3662926A1

Designated contracting state (EPC)
AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)
EP 0163529 A1 19851204; EP 0163529 B1 19910821; AT E143374 T1 19961015; AU 4309285 A 19851205; AU 590197 B2 19891102; CA 1304022 C 19920623; DE 3583824 D1 19910926; DE 3588125 D1 19961031; DE 3588125 T2 19970213; DK 157933 B 19900305; DK 157933 C 19900827; DK 323687 A 19870625; DK 323687 D0 19870625; DK 58285 D0 19850208; EP 0427296 A1 19910515; EP 0427296 B1 19960925; ES 543594 A0 19860901; ES 551941 A0 19861216; ES 8609483 A1 19860901; ES 8702488 A1 19861216; FI 852135 A0 19850529; FI 852135 L 19851201; FI 89183 B 19930514; FI 89183 C 19930825; GR 851304 B 19851125; IE 66387 B1 19951227; IE 851331 L 19851130; JP 2519023 B2 19960731; JP H06141865 A 19940524; JP H06141866 A 19940524; JP H0630613 B2 19940427; JP H07121226 B2 19951225; JP H07309896 A 19951128; JP H0746998 B2 19950524; JP S611389 A 19860107; NO 174351 B 19940110; NO 174351 C 19940420; NO 852132 L 19851202; NZ 212243 A 19880530; PT 80551 A 19850601; PT 80551 B 19870409; US 4916212 A 19900410

DOCDB simple family (application)
EP 85303775 A 19850529; AT 90121887 T 19850529; AU 4309285 A 19850529; CA 482722 A 19850529; DE 3583824 T 19850529; DE 3588125 T 19850529; DK 323687 A 19870625; DK 58285 A 19850208; EP 90121887 A 19850529; ES 543594 A 19850529; ES 551941 A 19860213; FI 852135 A 19850529; GR 850101304 A 19850528; IE 133185 A 19850529; JP 11629785 A 19850529; JP 12164993 A 19930524; JP 12169493 A 19930524; JP 14208595 A 19950608; NO 852132 A 19850529; NZ 21224385 A 19850529; PT 8055185 A 19850529; US 73912385 A 19850529